

NOV 06 2006

Atty. Dkt. No. 061715-0381

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Currently Amended) A method ~~of controlling handover between a first technology network and a second technology network~~, comprising ~~the steps of:~~

detecting, by a mobile node, information about regions of an area of ~~the first~~ a first technology network; and

deciding, by the mobile node, initiating a handover procedure between the first technology network and a second technology networks network based on the detected region information.

2. (Withdrawn) A method of controlling handover between a first technology network and a second technology network, comprising the steps of:

arranging border access nodes for accessing the first technology network at border regions of an area of the first technology network, the border access nodes indicating information about a border region;

arranging non-border access nodes for accessing the first technology network at non-border regions of the area of the first technology network, the non-border access nodes indicating information about a non-border region;

detecting the information about the border and non-border regions; and

deciding initiating a handover procedure between the first and second technology networks based on the detected information.

3. (Withdrawn) The method according to claim 2, comprising the step of:

in case the detected region information is border region information, aggressively deciding initiating the handover procedure from the first technology network to the second technology network.

Atty. Dkt. No. 061715-0381

4. (Withdrawn) The method according to claim 2, further comprising the step of:
in case the detected region information is non-border region information, conservatively deciding initiating the handover procedure from the first technology network to the second technology network.
5. (Withdrawn) The method according to claim 2, further comprising the steps of:
detecting a signal strength from the first technology network; and
in case the detected signal strength is below a predetermined threshold, deciding initiating the handover procedure between the first and second technology networks based on the detected region information.
6. (Withdrawn) The method according to claim 2, further comprising the steps of:
detecting a signal strength from the first technology network; and
in case the detected signal strength is below a predetermined threshold and the detected region information is border region information, aggressively deciding initiating the handover procedure from the first technology network to the second technology network.
7. (Withdrawn) The method according to claim 2, further comprising the steps of:
detecting a signal strength from the first technology network; and
in case the detected signal strength is below a predetermined threshold and the region information is non-border region information, conservatively deciding initiating the handover procedure from the first technology network to the second technology network.
8. (Currently Amended) A method ~~of controlling handover between a first technology network and a second technology network~~, comprising the steps of:
detecting, by a mobile node, information about regions of an area of ~~the first~~ a first technology network; and
deciding, by the mobile node, preparing a handover procedure between the first technology network and a second technology ~~networks~~ network based on the detected region information.

Atty. Dkt. No. 061715-0381

9. (Withdrawn) A method of controlling handover between a first technology network and a second technology network, comprising the steps of:

arranging border access nodes for accessing the first technology network at border regions of an area of the first technology network, the border access nodes indicating information about a border region;

arranging non-border access nodes for accessing the first technology network at non-border regions of the area of the first technology network, the non-border access nodes indicating information about a non-border region;

detecting the information about the border and non-border regions; and

deciding preparing a handover procedure between the first and second technology networks based on the detected information.

10. (Withdrawn) The method according to claim 9, comprising the step of:

in case the detected region information is border region information, aggressively deciding preparing the handover procedure from the first technology network to the second technology network.

11. (Withdrawn) The method according to claim 9, comprising the step of:

in case the detected region information is non-border region information, conservatively deciding preparing the handover procedure from the first technology network to the second technology network.

12. (Withdrawn) The method according to claim 9, further comprising the steps of:

detecting a signal strength from the first technology network; and

in case the detected signal strength is below a predetermined threshold, deciding preparing the handover procedure between the first and second technology networks based on the detected region information.

13. (Withdrawn) The method according to claim 9, further comprising the steps of:

detecting a signal strength from the first technology network; and

Atty. Dkt. No. 061715-0381

in case the detected signal strength is below a predetermined threshold and the detected region information is border region information, aggressively deciding preparing the handover procedure from the first technology network to the second technology network.

14. (Withdrawn) The method according to claim 9, further comprising the steps of:

detecting a signal strength from the first technology network; and

in case the detected signal strength is below a predetermined threshold and the region information is non-border information, conservatively deciding preparing the handover procedure from the first technology network to the second technology network.

15. (Currently Amended) A method ~~of controlling handover between a first technology network and a second technology network~~, comprising the steps of:

detecting, by a mobile node, information about regions of an area of ~~the first~~ a first technology network; and

deciding, by a mobile node, preparing a handover procedure between the first technology network and a second technology networks network based on the detected region information, and deciding performing actual handover between the first and second technology networks based on the detected region information.

16. (Withdrawn) A method of controlling handover between a first technology network and a second technology network, comprising the steps of:

arranging border access nodes for accessing the first technology network at border regions of an area of the first technology network, the border access nodes indicating information about a border region;

arranging non-border access nodes for accessing the first technology network at non-border regions of the area of the first technology network, the non-border access nodes indicating information about a non-border region;

detecting the information about the border and non-border regions; and

deciding preparing a handover procedure and performing actual handover between the first and second technology networks based on the detected information.

Atty. Dkt. No. 061715-0381

17. (Withdrawn) The method according to claim 16, further comprising the steps of:
in case the detected region information is border region information, aggressively deciding preparing the handover procedure from the first technology network to the second technology network;
detecting a signal strength from the first technology network; and
in case the detected signal strength is below a predetermined threshold, deciding performing the actual handover between the first and second technology networks based on the detected region information.
18. (Withdrawn) The method according to claim 16, further comprising the steps of:
in case the detected region information is non-border region information, conservatively deciding preparing the handover procedure from the first to second technology network;
detecting a signal strength from the first technology network; and
in case the detected signal strength is below a predetermined threshold, deciding performing the actual handover between the first and second technology networks based on the detected region information.
19. (Withdrawn) A method of controlling handover between a first technology network and a second technology network, comprising the steps of:
detecting information about regions of an area of the first technology network;
detecting information about a movement of a mobile node in the first technology network; and
deciding initiating a handover procedure between the first and second technology networks based on the detected region information and movement information.
20. (Withdrawn) A method of controlling handover between a first technology network and a second technology network, comprising the steps of:
arranging border access nodes for accessing the first technology network at border regions of an area of the first technology network, the border access nodes indicating information about a border region;

Atty. Dkt. No. 061715-0381

arranging non-border access nodes for accessing the first technology network at non-border regions of the area of the first technology network, the non-border access nodes having overlapping coverage with that of the border access nodes and indicating information about a non-border region;

detecting the information about the border and non-border regions;

storing region information detected at certain time instances;

detecting information about a movement of a mobile node in the first technology network on the basis of detected and stored region information; and

deciding initiating a handover procedure between the first and second technology networks based on the detected region and movement information.

21. (Withdrawn) A method of controlling handover between a first technology network and a second technology network, comprising the steps of:

detecting information about regions of an area of the first technology network;

detecting information about a movement of a mobile node in the first technology network; and

deciding preparing a handover procedure between the first and second technology networks based on the detected region information and movement information.

22. (Withdrawn) A method of controlling handover between a first technology network and a second technology network, comprising the steps of:

arranging border access nodes for accessing the first technology network at border regions of an area of the first technology network, the border access nodes indicating information about a border region;

arranging non-border access nodes for accessing the first technology network at non-border regions of the area of the first technology network, the non-border access nodes having overlapping coverage with that of the border access nodes and indicating information about a non-border region;

detecting the information about the border and non-border regions;

Atty. Dkt. No. 061715-0381

storing region information detected at certain time instances;
detecting information about a movement of a mobile node in the first technology network on the basis of detected and stored region information; and
deciding preparing a handover procedure between the first and second technology networks based on the detected region and movement information.

23. (Withdrawn) A method of controlling handover between a first technology network and a second technology network, comprising the steps of:

detecting information about regions of an area of the first technology network;
detecting information about a movement of a mobile node in the first technology network; and

deciding preparing a handover procedure between the first and second technology networks based on the detected region information and movement information, and deciding performing actual handover between the first and second technology networks based on the detected region information and movement information.

24. (Withdrawn) A method of controlling handover between a first technology network and a second technology network, comprising the steps of:

arranging border access nodes for accessing the first technology network at border regions of an area of the first technology network, the border access nodes indicating information about a border region;

arranging non-border access nodes for accessing the first technology network at non-border regions of the area of the first technology network, the non-border access nodes having overlapping coverage with that of the border access nodes and indicating information about a non-border region;

detecting the information about the border and non-border regions;
storing region information detected at certain time instances;
detecting information about a movement of a mobile node in the first technology network on the basis of detected and stored region information; and

Atty. Dkt. No. 061715-0381

deciding preparing a handover procedure and deciding performing actual handover between the first and second technology networks based on the detected region and movement information.

25. (Currently Amended) A mobile node ~~for controlling handover between a first technology network and a second technology network~~, comprising:

~~means for detecting~~ a detecting unit configured to detect information about regions of an area of ~~the first~~ a first technology network; and

~~means for deciding~~ a deciding unit configured to decide initiating a handover procedure between the first technology network and a second technology networks network based on the detected region information.

26. (Withdrawn) A mobile node for controlling handover between a first technology network and a second technology network, comprising:

means for detecting information about a border region which is transmitted by border access nodes for accessing the first technology network which are located at border regions of an area of the first technology network and information about a non-border region which is transmitted by non-border access nodes for accessing the first technology network which are located at non-border regions of the area of the first technology network; and

means for deciding initiating a handover procedure between the first and second technology networks based on the detected information.

27. (Withdrawn) The mobile node according to claim 26, further comprising means for aggressively deciding initiating the handover procedure from the first to the second technology network in case the detected region information is border region information.

28. (Withdrawn) The mobile node according to claim 26, further comprising means for conservatively deciding initiating the handover procedure from the first to the second technology network in case the detected region information is non-border region information.

Atty. Dkt. No. 061715-0381

29. (Withdrawn) The mobile node according to claim 26, further comprising:
means for detecting a signal strength from the first technology network; and
means for deciding initiating the handover procedure between the first and second technology networks based on the detected region information in case the detected signal strength is below a predetermined threshold.
30. (Withdrawn) The mobile node according to claim 26, further comprising:
means for detecting a signal strength from the first technology network; and
means for aggressively deciding initiating the handover procedure from the first to the second technology network in case the detected signal strength is below a predetermined threshold and the detected region information is border region information.
31. (Withdrawn) The mobile node according to claim 26, further comprising:
means for detecting a signal strength from the first technology network; and
means for conservatively deciding initiating the handover procedure from the first to the second technology network in case the detected signal strength is below a predetermined threshold and the region information is non-border information.
32. (Currently Amended) A mobile node ~~for controlling handover between a first technology network and a second technology network~~, comprising:
~~means for detecting a detecting unit configured to detect~~ information about regions of an area of ~~the first a first~~ technology network; and
~~means for deciding a deciding unit configured to decide~~ preparing a handover procedure between the first technology network and ~~a second technology networks network~~ based on the detected region information.
33. (Withdrawn) A mobile node for controlling handover between a first technology network and a second technology network, comprising:
means for detecting information about a border region which is transmitted by border access nodes for accessing the first technology network which are located at border regions of an

Atty. Dkt. No. 061715-0381

area of the first technology network and information about a non-border region which is transmitted by non-border access nodes for accessing the first technology network which are located at non-border regions of the area of the first technology network; and

means for deciding preparing a handover procedure between the first and second technology networks based on the detected information.

34. (Withdrawn) The mobile node according to claim 33, further comprising means for aggressively deciding preparing the handover procedure from the first to the second technology network in case the detected region information is border region information.

35. (Withdrawn) The mobile node according to claim 33, further comprising means for conservatively deciding preparing the handover procedure from the first to the second technology network in case the detected region information is non-border region information.

36. (Withdrawn) The mobile node according to claim 33, further comprising:

means for detecting a signal strength from the first technology network; and

means for deciding preparing the handover procedure between the first and second technology networks based on the detected region information in case the detected signal strength is below a predetermined threshold.

37. (Withdrawn) The mobile node according to claim 33, further comprising:

means for detecting a signal strength from the first technology network; and

means for aggressively deciding preparing the handover procedure from the first to the second technology network in case the detected signal strength is below a predetermined threshold and the detected region information is border region information.

38. (Withdrawn) The mobile node according to claim 33, further comprising:

means for detecting a signal strength from the first technology network; and

means for conservatively deciding preparing the handover procedure from the first to the

Atty. Dkt. No. 061715-0381

second technology network in case the detected signal strength is below a predetermined threshold and the region information is non-border information.

39. (Currently Amended) A mobile node ~~for controlling handover between a first technology network and a second technology network~~, comprising:

~~means for detecting~~ a detecting unit configured to detect information about regions of an area of ~~the first~~ a first technology network; and

~~means for deciding~~ a first deciding unit configured to decide preparing a handover procedure between the first technology network and ~~a second technology networks network~~ based on the detected region information, and ~~means for deciding~~ a second deciding unit configured to decide performing actual handover between the first and second technology networks based on the detected region information.

40. (Withdrawn) A mobile node for controlling handover between a first technology network and a second technology network, comprising:

means for detecting information about a border region which is transmitted by border access nodes for accessing the first technology network which are located at border regions of an area of the first technology network and information about a non-border region which is transmitted by non-border access nodes for accessing the first technology network which are located at non-border regions of the area of the first technology network; and

means for deciding preparing a handover procedure and means for deciding performing actual handover between the first and second technology networks based on the detected information.

41. (Withdrawn) The mobile node according to claim 40, further comprising:

means for aggressively deciding preparing the handover procedure from the first to the second technology network in case the detected region information is border region information;

means for detecting a signal strength from the first technology network; and

means for deciding performing the actual handover between the first and second

Atty. Dkt. No. 061715-0381

technology networks based on the detected region information in case the detected signal strength is below a predetermined threshold.

42. (Withdrawn) The mobile node according to claim 40, further comprising:

means for conservatively deciding preparing the handover procedure from the first to the second technology network in case the detected region information is non-border region information;

means for detecting a signal strength from the first technology network; and

means for deciding performing the actual handover between the first and second technology networks based on the detected region information in case the detected signal strength is below a predetermined threshold.

43. (Currently Amended) A mobile node ~~for controlling handover between a first technology network and a second technology network~~, comprising:

~~means for detecting a first detecting unit configured to detect~~ information about regions of an area of ~~the first a first~~ technology network;

~~means for detecting a second detecting unit configured to detect~~ information about a movement of a mobile node in the first technology network; and

~~means for deciding a deciding unit configured to decide~~ initiating a handover procedure between the first technology network and ~~a second technology networks network~~ based on the detected region information and movement information.

44. (Withdrawn) A mobile node for controlling handover between a first technology network and a second technology network, comprising:

means for detecting information about a border region which is transmitted by border access nodes for accessing the first technology network which are located at border regions of an area of the first technology network and information about a non-border region which is transmitted by non-border access nodes for accessing the first technology network which are located at non-border regions of the area of the first technology network, the non-border access nodes having overlapping coverage with that of the border access nodes;

Atty. Dkt. No. 061715-0381

means for storing region information detected at certain time instances;
means for detecting information about a movement of a mobile node in the first technology network on the basis of detected and stored region information; and
means for deciding initiating a handover procedure between the first and second technology networks based on the detected region and movement information.

45. (Withdrawn) A mobile node for controlling handover between a first technology network and a second technology network, comprising:

means for detecting information about regions of an area of the first technology network;
means for detecting information about a movement of a mobile node in the first technology network; and
means for deciding preparing a handover procedure between the first and second technology networks based on the detected region information and movement information.

46. (Withdrawn) A mobile node for controlling handover between a first technology network and a second technology network, comprising:

means for detecting information about a border region which is transmitted by border access nodes for accessing the first technology network which are located at border regions of an area of the first technology network and information about a non-border region which is transmitted by non-border access nodes for accessing the first technology network which are located at non-border regions of the area of the first technology network, the non-border access nodes having overlapping coverage with that of the border access nodes;
means for storing region information detected at certain time instances;
means for detecting information about a movement of a mobile node in the first technology network on the basis of detected and stored region information; and
means for deciding preparing a handover procedure between the first and second technology networks based on the detected region and movement information.

47. (Withdrawn) A mobile node for controlling handover between a first technology network and a second technology network, comprising:

Atty. Dkt. No. 061715-0381

means for detecting information about regions of an area of the first technology network;
means for detecting information about a movement of a mobile node in the first technology network; and
means for deciding preparing a handover procedure between the first and second technology networks based on the detected region information and movement information, and
means for deciding performing actual handover between the first and second technology networks based on the detected region information and movement information.

48. (Withdrawn) A mobile node for controlling handover between a first technology network and a second technology network, comprising:

means for detecting information about a border region which is transmitted by border access nodes for accessing the first technology network which are located at border regions of an area of the first technology network and information about a non-border region which is transmitted by non-border access nodes for accessing the first technology network which are located at non-border regions of the area of the first technology network, the non-border access nodes having overlapping coverage with that of the border access nodes;

means for storing region information detected at certain time instances;

means for detecting information about a movement of a mobile node in the first technology network on the basis of detected and stored region information; and

means for deciding preparing a handover procedure and deciding performing actual handover between the first and second technology networks based on the detected region and movement information.

49. (Currently Amended) An access node of a first technology network, comprising:

~~means for setting a setting unit configured to set~~ information about at least a first region and a second region of an area of the first technology network in which region the access node is located, the region information being first technology network information; and

~~means for transmitting a transmitting unit configured to transmit~~ the region information.

Atty. Dkt. No. 061715-0381

50. (Currently Amended) The access node according to claim 49, in which the access node is a WLAN access point and the ~~setting means~~ setting unit is ~~capable of setting~~ configured to set region information by assigning proper values to certain bits reserved in the beacon frames of the WLAN access points, the bit values indicating the region information where the access point is located.

51. (Original) A communication network system, comprising:
a mobile node according to claim 49.